REGULATORY FLEXIBILITY COMMITTEE

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Authority: IC 8-1-2.6-4

MEETING MINUTES[1]

Meeting Date:	**August 26, 2003**
Meeting Time:	**1:00 P.M.**
Meeting Place:	**State House, 200 W. Washington St., House Chambers**
Meeting City:	**Indianapolis, Indiana**
Meeting Number:	**1**

Members Present: **Rep. Dan Stevenson, Co-Chairperson; Rep. Terri Austin; Rep. Alan Chowning; Rep. Jerry Denbo; Rep. Ryan Dvorak; Rep. Craig Fry; Rep. Scott Pelath; Rep. Jack Lutz; Rep. Robert Behning; Rep. David Frizzell; Rep. Brooks LaPlante; Rep. Michael Murphy; Rep. David Yount; Sen. James Merritt, Co-Chairperson; Sen. David Long; Sen. Beverly Gard; Sen. Thomas Wyss; Sen.Brandt Hershman; Sen. Timothy Lanane; Sen. Frank Mrvan.**

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[1] Exhibits and other materials referenced in these minutes can be inspected and copied in the Legislative Information Center in Room 230 of the State House in Indianapolis, Indiana. Requests for copies may be mailed to the Legislative Information Center, Legislative Services Agency, 200 West Washington Street, Indianapolis, IN 46204-2789. A fee of $0.15 per page and mailing costs will be charged for copies. These minutes are also available on the Internet at the General Assembly homepage. The URL address of the General Assembly homepage is http://www.ai.org/legislative/. No fee is charged for viewing, downloading, or printing minutes from the Internet.

Members Absent: **Rep. Scott Reske; Sen.Becky Skillman; Sen. Lawrence Borst; Sen. Glenn Howard; Sen. Larry Lutz.**

Representative Dan Stevenson and Senator James Merritt, Co-Chairmen of the Regulatory Flexibility Committee, convened the meeting at 1:15 p.m. Representative Stevenson indicated that the meeting would be devoted to the two resolutions assigned to the Committee by the Legislative Council for further study: (1) SR 42 (2003), concerning the termination of electric or gas utilities during the heating season; and (2) HR 66 (2003), concerning sustainable energy initiatives. Representative Stevenson then invited testimony on SR 42.

SR 42: Termination of Utility Service During the Heating Season

(1) Testimony from Vectren Energy Delivery[2]

Ed Simcox, President of the Indiana Electric Association, began the discussion of SR 42 by asking the Committee to consider the two main sources of assistance available to residential customers who face difficulty in paying energy bills during the heating season: (1) home energy assistance through governmentally funded programs; and (2) budget billing, payment arrangements, and charitable assistance provided by the utility companies themselves. Mr. Simcox then invited Doug Karl to address the second source of assistance, as provided by Vectren Energy Delivery.

Mr. Karl, Vice President of Marketing and Customer Service for Vectren, introduced his company as a natural gas and electric distribution company serving 700,000 customers in 51 Indiana counties. Like most energy utilities, Vectren offers its customers a budget billing option, which allows for levelized payments over a twelve-month period. By paying the same amount every month, customers can avoid the uncertainty of high bills during the heating season months.

Mr. Karl noted that in addition to offering budget billing programs, most utilities are willing to make special payment arrangements for customers having difficulty paying their bills. Under most circumstances, a customer simply needs to contact the utility and discuss possible payment options. Utilities also provide customers with information on how to seek energy assistance funds through government programs.

Vectren provides additional assistance on a voluntary basis through its "Share the Warmth Program." In 2003, Vectren generated $1.3 million to provide 4,410 households with assistance. Mr. Karl pointed out that Citizens Gas and other utilities have similar programs.

Mr. Karl next addressed the proposal contained in SR 42 to extend the length of the moratorium period during which a utility may not terminate service to customers who are eligible for and have applied for assistance through the federal Low Income Home Energy Assistance Program (LIHEAP). Under current state law, the moratorium period runs from December 1 of one year through March 15 of the immediately following year. SR 42 urges the extension of this period through March 31 of the immediately following year.

Mr. Karl then explained why Vectren and other utility companies oppose the extension of the existing moratorium. According to Mr. Karl, the moratorium provides no incentive for customers to conserve energy and leads to a lack of awareness of the cost of utility

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[2]See Exhibit 1.

service. The moratorium can encourage customers to avoid paying their energy bills during the heating season, because they know their service cannot be terminated during the covered months. As a result, many customers must enter into special payment arrangements at the end of the heating season and face disconnection if those arrangements are not met. Customers protected by the moratorium often begin the next heating season with a past due balance that carries forward into the next moratorium period.

After concluding his remarks, Mr. Karl invited questions from the Committee. Senator Lanane, who authored SR 42, stated that he has viewed the moratorium as a safety net for eligible customers. While not doubting that some customers abuse the protection the moratorium affords, Senator Lanane wondered whether there were statistics on the number of repeat participants. Mr. Karl responded that 45,000 Vectren customers were protected during the most recent heating season. The majority of those participants now have an outstanding balance, averaging $250, on their accounts. In the Vectren North territory, 22,000 customers are currently on disconnect status. While Mr. Karl was unsure how many of those customers were eligible for moratorium protection, he offered to provide that statistic to the Committee at a later time.

Representative Murphy then noted that the 45,000 customers cited by Mr. Karl as being eligible for the moratorium represent approximately 7% of Vectren's total customers. Representative Murphy wondered whether that percentage was typical for the industry. Mr. Karl stated that the percentage was typical for Vectren, and a representative from NIPSCO spoke up from the audience to report that the percentage of NIPSCO/NiSource customers who are currently eligible is about 4%.

Representative Austin asked whether the utility industry would consider participating in a one-year trial period in which the moratorium would be extended. During that time, utilities could collect data on the number of eligible customers who enter into deferred payment plans and default on the plans, versus the number of customers who use due diligence to make payments on their plans. Mr. Karl guessed that the industry might be open to a fifteen-day extension for one year, but he suggested that most companies already have the data mentioned by Representative Austin. Vectren, for example, currently has statistics on the percentage of its 45,000 eligible customers who have entered into payment plans and defaulted. Mr. Karl suspected that many of the statistics utilities currently have would illustrate that the moratorium already leads to unpaid balances and disconnections.

Upon further questioning by Representative Murphy on the percentage of eligible customers who actually end up being disconnected after the heating season for unpaid accumulated balances, Mr. Karl, not having statistics available, deferred to the NIPSCO/NiSource representative. She indicated that approximately 1% of eligible customers with outstanding balances at the end of the season end up being disconnected. Mr. Karl guessed that the figures for Vectren would be similar.

After further discussion about disconnection percentages, Representative Murphy inquired about the utilities' reconnection fees and required deposits. Mr. Karl replied that Vectren charges a $48 reconnection fee and a deposit based on two months of the customer's average annual energy bill. NIPSCO/NiSource charges a two-month deposit for electric bills and a four-month deposit for gas bills. Mr. Karl explained that the deposits are meant to protect the utilities against write-offs. Vectren, for example, anticipates $8 million in write-offs for unpaid accounts for all Indiana customers for the current year. Representative Murphy then asked about the total amount held in deposits and the amount of interest earned on the deposits. According to Mr. Karl, about 15% of Vectren

customers have deposits on record, representing about $20 million in total deposits. The deposits earn interest at 6%, and the deposits and interest are returned to customers upon payment of their obligations.

(2) Testimony from Indiana Community Action Association[3]

Following the testimony from the utilities, Representative Stevenson introduced Beverly Henry, Executive Director of the Southeastern Indiana Economic Opportunity Corporation. Ms. Henry explained that she was speaking on behalf of the Indiana Community Action Association, a statewide network of community action programs (CAPs) that administer and distribute the federal LIHEAP funds received by the Indiana Family and Social Services Administration. She noted that LIHEAP funds are used to fund two main programs: (1) the energy assistance program, through which CAP agencies make direct payments to the utilities serving low-income customers; and (2) the weatherization program, which provides eligible customers with assistance for energy efficiency upgrades to their homes. In Indiana, eligibility for both programs is based on 125% of the federal poverty level, or $23,000 annually for a family of four.

Ms. Henry pointed out that LIHEAP funds are insufficient to meet the total energy burden faced by low-income consumers. Households at or below the federal poverty level can spend from 11% to over 37% of their annual income on home energy bills. As a result of the high energy cost burden, many low-income customers go without food and medical care in order to pay heating bills. Others incur debt by not paying other bills or by using credit cards to pay for food and other necessities.

Ms. Henry reported that Indiana received a gross allotment of $50.2 million in federal energy assistance funds for fiscal year 2003. Of this amount, $40.9 million was used for direct assistance with bill payment, $5 million was directed to weatherization services, and the rest covered administrative costs. The average benefit per household for the entire season was $292. Of the 126,612 families served, 112,638 had an annual household income of less than $15,000.

Ms. Henry then stressed the need for uniform reporting by utility companies of certain statistics for low-income accounts. A uniform reporting system would allow companies to provide an accurate picture of low-income customers during presentations to various regulatory bodies. She suggested that the following information would be useful with respect to both assistance-eligible and non-eligible accounts: the total number of customers, the total amount billed, the average amount billed, the number of accounts in arrears (categorized as 30, 60, or 90 days past due), and the amounts in arrearage.

Ms. Henry also suggested that the Indiana sales tax collected on utility accounts receiving LIHEAP benefits could be redirected back to the energy assistance program to provide additional aid. Ms. Henry noted that Indiana sales tax is collected on all residential utility accounts, including those that receive LIHEAP benefits. An additional $2.5 million could be generated for energy assistance if the sales tax collected on LIHEAP accounts were directed back to the program. This re-channeled revenue would assist an additional 8,561 households with an average benefit of $292. Other states provide sales tax relief for LIHEAP recipients, with options ranging from providing a complete exemption for LIHEAP accounts, to exempting the first 500 to 750 kWh consumed, to taxing gas and electric sales at lower rates.

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[3]See Exhibit 2.

Finally, Ms. Henry addressed the issue of the disconnection moratorium by noting that CAP agencies routinely advise their clients on the importance of making regular payments on their heating bills and warn them of the possibility of disconnection once the moratorium ends on March 15. During the most recent heating season, CAP agencies initiated a pilot program to provide energy education to LIHEAP recipients. Of the 1,710 families that received the education, 504 signed up and participated in programs to make their homes more energy efficient. Ms. Henry argued that the moratorium should not be discontinued, noting that it provides needed relief for CAP households, many of which include children.

Following Ms. Henry's presentation, Representative Murphy asked whether the LIHEAP assistance provided through the CAP agencies is in addition to any poor relief available through a township trustee's office. Ms. Henry explained that LIHEAP assistance is separate from township trustee services, but that CAP agencies often refer clients who are facing significant crises to township trustees. CAP agencies also work closely with utilities, churches, and other service agencies to ensure that clients receive adequate assistance.

Senator Lanane asked about referrals to the weatherization program. Ms. Henry informed him that all clients who apply for LIHEAP funds are told about the weatherization program and considered for the program. However, priority is given to the elderly, people with disabilities, and households with children.

(3) Testimony from Lafayette Urban Ministry

The Committee then heard from Patti O'Callaghan, Director of Social Justice for the Lafayette Urban Ministry (LUM). Ms. O'Callaghan explained that LUM is an organization of 47 churches serving low-income residents of Tippecanoe County. Ms. O'Callaghan then recalled last season's extremely cold winter and the simultaneous increase in energy costs, with natural gas prices rising 40%, and heating oil costs increasing by 50% from the prior season. As a result, many people faced difficulties keeping warm and sometimes turned to dangerous alternatives such as space heaters, which present fire hazards.

Having noted the difficulties low-income families face during the heating season, Ms. O'Callaghan urged the Committee to support the extension of the disconnection moratorium through March 31, as proposed in HB 1459 (2003) and SR 42. Pointing out that NIPSCO disconnected 450 households in March 2003, she argued that the extension would provide relief through more of the cold season. The later date would also give more customers the opportunity to use their tax returns to pay heating bills.

Ms. O'Callaghan also offered support for provisions in HB 1459 (2003) that would have required a utility to offer a residential customer a deferred payment plan for past due amounts and a budget, or levelized, plan for past due and future charges during the heating season. She explained that when customers are disconnected, they typically must pay past due amounts, a reconnect fee, plus a deposit. While LUM pays reconnect fees for its clients, other agencies and township trustees are unable to do so.

Noting that LUM distributed $53,000 in energy assistance in 2002 and has provided $33,558 already in 2003, Ms. O'Callaghan urged that the moratorium be extended to low-income persons who receive energy assistance from programs other than LIHEAP, including non-profit organizations such as LUM. While LIHEAP assistance is limited to families earning 125% or less of the federal poverty level, LUM is able to assist more low-income families by basing eligibility for assistance on 150% of the federal poverty level. However, these additional low-income families served by LUM still face the threat of disconnection during the heating season if they cannot fully meet their obligations to utilities. In other cases, families that would otherwise qualify for LIHEAP assistance face

disconnection when they seek help from CAPs after all available funds have already been distributed.

Voicing support for the proposal to redirect the sales tax collected on LIHEAP accounts back to energy assistance programs, Ms. O'Callaghan also raised the possibility of creating an "energy assistance contingency fund." Just as local governments use tax increment financing (TIF) to capture property taxes collected above an established baseline, the state could establish a baseline for sales tax on utility accounts. Any sales tax amounts collected above the baseline, as would occur when natural gas prices are high, would be captured and directed to an energy assistance fund to provide additional aid to low-income customers. HB 1758 (2003), which proposed the creation of such a fund, was estimated to generate an additional $10.5 million for low energy assistance programs in the 2004 state fiscal year. Urging the introduction of a similar bill in the upcoming session, Ms. O'Callaghan then concluded her remarks.

Referring to the proposal to redirect sales tax on LIHEAP accounts back to assistance programs, Representative Behning suggested that it would be more efficient to just exempt LIHEAP accounts from the sales tax. This would save the Department of State Revenue administrative costs and make more money available for the programs themselves. Ms. O'Callaghan indicated that LUM would support the most cost-effective means available to generate additional funding.

Senator Lanane then asked what Indiana can expect to receive in LIHEAP assistance during the upcoming winter. Ms. O'Callaghan deferred to the CAP agencies on any available projections, explaining that LUM does not administer LIHEAP funds and provides aid through entirely private donations. She did note, however, that Indiana received an increased LIHEAP appropriation for the past winter.

Representation Stevenson indicated that the Committee would consider any potential legislation on the issues raised in SR 42 at a future time and invited testimony on HR 66.

HR 66: Sustainable Energy

(1) Testimony from Citizens Action Coalition (CAC)[4]

Opening the discussion on HR 66, Grant Smith of the CAC began by thanking Representative Pelath and Senator Lanane for introducing bills in 2003 to create a sustainable energy corporation to implement sustainable energy technologies and programs in Indiana. He then noted that the CAC has been successful in recent years in gaining legislative support for initiatives encouraging pollution prevention and energy efficiency.

Focusing on energy efficiency, Mr. Smith explained that energy efficiency measures, which address demand side resources, save money and improve the quality of the environment. As examples of the economic benefits, Mr. Smith pointed to Vermont's creation of an energy efficiency utility,[5] which saves $1.83 in electricity costs for every dollar invested, and Wisconsin's efficiency program, which saves $2.76 in costs for every dollar spent on the program. According to Mr. Smith, energy efficiency programs also have the potential

[4]See Exhibit 3 for the bibliography of sources consulted by the CAC in the preparation of its testimony.

[5]See Exhibit 4.

to spur economic development and create jobs. For example, a recent study[6] estimated that Indiana could create 22,000 net new jobs by 2020 and save ratepayers $700 million in annual net electricity costs, by implementing a comprehensive energy efficiency and renewable resource program over that time.

In addition to economic benefits, energy efficiency measures may also improve the reliability of energy delivery by reducing demand on the system. Mr. Smith reported that within one year of the energy crisis in California, peak demand was reduced in that state by 10% through a combination of energy efficiency measures and conservation. He noted that most of the reduction in demand was achieved through energy efficiency measures (such as the use of more efficient lighting, appliances, and industrial motors), as compared to conservation (through thermostat adjustments, decreased appliance usage, etc.).

Turning to the environmental benefits, Mr. Smith noted that efficiency measures can be implemented to improve the quality of the environment and to hedge against upcoming environmental regulations. In the same study that predicted new job creation and energy cost savings for Indiana through energy efficiency measures, it was estimated that by 2020 such a program would also result in a 39% reduction in carbon dioxide from year 2000 levels. Mr. Smith pointed out that this reduction is larger than that required in the Kyoto Accord.

Mr. Smith explained that most state energy efficiency programs are funded through a public benefits charge on customer bills. He then directed the Committee's attention to a summary of the public benefits charges imposed by different states.[7] Noting that the Council of State Governments has recognized the value of public benefits charges as economic development tools for states, Mr. Smith highlighted Efficiency Vermont[8] as a model of a successful state program. Funded through an "energy efficiency charge" on all ratepayer bills, Efficiency Vermont began operating in 2000 as the nation's first statewide energy efficiency utility (EEU). All efficiency services in the state are delivered under the name "Efficiency Vermont" and are administered by the Vermont Energy Corporation, a non-utility, non-profit entity that operates under a performance-based contract with the state's Public Service Board. Mr. Smith encouraged the legislature to employ a similar structure in implementing any statewide efficiency program in Indiana.

Representative Stevenson noted that Wisconsin recently diverted all of the money from its energy efficiency program to help remedy the state's budget shortfall. Mr. Smith replied that such an occurrence demonstrates the advantage of Vermont's program, in which money collected from the energy efficiency charge is not deposited with the state but is administered separately by a non-profit corporation.

On the issue of alternative energy sources, Senator Long pointed out that fuel cell technology requires oxygen and hydrogen, and that hydrogen can be difficult to harness. He noted that natural gas is the main source of hydrogen for fuel cells and asked whether the success of fuel cell technology will depend on the future availability of natural gas. Mr. Smith explained that while fuel cells now rely largely on natural gas as a hydrogen source,

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[6]ENVIRONMENTAL LAW AND POLICY CENTER, REPOWERING THE MIDWEST: THE CLEAN ENERGY DEVELOPMENT PLAN FOR THE HEARTLAND; CAPTURING 21ST CENTURY OPPORTUNITIES FOR CLEAN ENERGY (2001). (See Exhibit 5.)

[7]See Exhibit 6.

[8]See Exhibit 4.

there is no shortage of available hydrogen. He noted that with large amounts of hydogren being used in refining and for de-sulfurizing diesel fuel, industries worldwide manufacture 50 billion tons of hydrogen annually. According to a recently published paper,[9] if just 20% of the country's natural gas production were used to harness hydrogen, enough energy would be generated to power the nation for a year.

Noting that Indiana does not have suitable weather for large-scale use of energy sources such as wind and solar power, Representative Pelath suggested that biomass may be a more viable alternative for the state, given Indiana's significant crop production. He expressed concern, however, that the burning of biomass would contribute to the state's pollution problem. Mr. Smith agreed that biomass is Indiana's most viable alternative energy source, and reported that there is some scientific opinion that the negative environmental effects of burning biomass are cancelled by the planting of crops, which release oxygen into the air. He noted that the gasification of biomass is an alternative to burning, but that the process is cost-prohibitive at this point.

Returning to the concept of an energy efficiency charge on utility bills, Senator Hershman suggested that, given the energy burden already faced by consumers, a better policy might involve capturing the sales tax on purchases of Energy Star appliances and using the revenue for energy efficiency measures. In response, Mr. Smith maintained that an efficiency surcharge would best enable the creation of a separate institution that could provide the necessary delivery, marketing, and promotion of efficiency measures on a statewide basis. He argued that few people are aware of Indiana's existing tax incentives, such as those available for insulation measures, and that the current piecemeal approach needs to be replaced by a more comprehensive system.

(2) Testimony from Siemens Building Technologies

Representative Stevenson then invited Jeff Metcalf from Siemens Building Technologies to address efficiency systems for buildings. Mr. Metcalf explained that Siemens is a global company with $80 billion in yearly sales and operations throughout the country, including a significant presence in Indianapolis. Siemens and its subsidiaries manufacture energy efficient lighting, fire protection equipment, mechanical control systems, and electricity delivery equipment. The company's 100 Indianapolis employees work with K-12 schools, higher education institutions, health care facilities, local government units, and commercial and industrial facilities to implement energy efficiency projects.

After introducing his company, Mr. Metcalf indicated that he would address some of the barriers to introducing energy efficiency measures into the marketplace. Mr. Metcalf noted that when Siemens employees evaluate an aging building, they are often able to suggest efficiency measures that would save the owner 20% to 30% in utility costs. However, building owners often resist implementing such measures, due to the up-front costs involved. This resistance is especially prevalent in the industrial and healthcare settings, in which there are often self-imposed payback criteria established in corporate policies. For example, some companies require that any efficiency measures implemented must pay for themselves, through realized energy savings, within two years.

Another barrier to the deployment of energy efficiency measures in Indiana is the state's low utility costs. While the low costs benefit consumers, they reduce incentives to conserve energy and to spend present dollars to realize future utility savings. As a

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[9] ARMORY B. LOVINS, ROCKY MOUNTAIN INSTITUTE, TWENTY HYDROGEN MYTHS (2003). (See Exhibit 7.)

possible solution to these challenges, Mr. Meltcalf suggested implementing legislative policies that would involve certain market interventions, such as funding to help companies buy down the payback amount imposed by corporate policies. He also noted that Indiana law currently allows Siemens' public-sector clients to enter into energy savings contracts if the energy savings from the efficiency measures installed can be realized over a period of ten years. These contracts also allow schools and local governments to pay for the costs of the measures over a period of ten years or the average life of the measures installed, whichever is less. Mr. Metcalf argued that similar mechanisms should be available to private companies, allowing them to spread the costs of efficiency measures over a longer period of time, thereby realizing energy savings over a more realistic timeframe.

After listening to Mr. Metcalf's policy recommendations, Representative Murphy suggested that Siemens should direct its efforts toward improved marketing and customer education, instead of asking the legislature to intervene in the private market. Mr. Metcalf responded that Siemens already directs considerable efforts toward educating its customers, but that Indiana's low utility costs still pose a sizable barrier toward more widespread implementation of efficiency measures. He noted that the lack of incentives in the current climate impacts not only Siemens but also consulting engineers and other energy efficiency contractors. He maintained that by offering incentives, the state could expand the amount of energy efficiency work being done across Indiana, which would benefit all consumers.

Noting his former employment in the industrial motors division of General Electric, Senator Wyss expressed an appreciation of the challenges faced by Siemens in trying to encourage companies to invest in energy efficiency products. He agreed that the state should consider providing incentives for investment in products such as more efficient industrial motors, given that a large portion of the state's energy consumption is attributable to the use of motors and other industrial equipment.

(3) Testimony from Waste Management[10]

Turning the Committee's attention to gas recovery systems, Representative Stevenson invited Jim Davis, Director of Operations for Waste Management Indiana, to testify. Mr. Davis introduced his company as a subsidiary of Waste Management, Inc., the country's largest solid waste disposal company. With 72 landfill gas projects in 22 states, Waste Management is also the largest independent producer of landfill gas power. Mr. Davis noted that while landfill gas-to-energy projects provide a clean source of energy, they are underutilized as an energy source due to the costs involved. For example, the 300 landfill gas projects online nationwide represent only a 10% utilization of available landfill gas.

In Indiana, Waste Management has five gas-to-energy projects online, including two plants at the Twin Bridges Recycling and Disposal Facility in Danville. The company has entered into additional contracts with Wabash Valley Power Association, Inc., which built the second plant at the Danville site in 2002. These contracts involve the ongoing construction of a plant in Logansport and the planned construction of a plant in Jay County in 2004.

Mr. Davis explained that electricity is generated at the Danville facility by eight 800 kW-rated gas engines, which are manufactured by Caterpillar in Lafayette. With a generating capacity of 6,400 kW, the Danville facility involved a project capital cost of $7 million. In

[10]See Exhibit 8.

contrast, the more common treatment of landfill gas, which involves burning the gas in a flare, requires $85,000 of capital investment. Mr. Davis pointed out that these respective returns on capital represent an impediment to the development of gas-to-energy projects. He further noted that the availability of the § 29 federal income tax credit for producing fuel from nonconventional sources influenced the decisions to build the Danville facilities. However, this credit expired for most qualifying facilities in 2003 and will expire for newer biomass facilities, including the Danville facilities, in 2008. Mr. Davis urged the committee to encourage Indiana's Congressional delegation to support the inclusion of a similar credit now contained in both versions of the energy bill being debated in Washington.

After stressing the need for financial incentives to build gas-to-energy projects, Mr. Davis invited questions from the Committee. Senator Long asked about the average lifespan of a gas-to-energy facility. Mr. Davis explained that landfill gas production is largely dependent on the life of the landfill, but usually continues for 20 to 30 years after waste is placed in the landfill. For the Danville site, this translates into an approximate 50-year lifespan, with the landfill itself having a 30-year lifespan for collecting waste, followed by another 20 years in which gas will continue to be produced and transformed into usable energy.

In response to a question by Senator Long about the composition of the gas produced, Mr. Davis explained that anaerobic bacteria digest the organic matter in trash to produce methane. He noted that while methane generation begins fairly quickly after trash is deposited in a landfill, the traditional approach of creating a "dry tomb" environment at landfills to protect groundwater actually slows the decomposition process somewhat. In order to make more gas available for conversion to usable energy, Waste Management is currently working with the U.S. Environmental Protection Agency to research "bioreactor" methods, which accelerate decomposition and the resulting gas production by increasing the moisture content in landfills.

Senator Gard then asked whether there is a difference in the quality of the gas produced at different landfills, based on the composition of the material in a particular landfill. According to Mr. Davis, the typical landfill produces gas that is 55% methane and 45% carbon dioxide. However, at sites containing larger amounts of organic matter, such as wastewater treatment sludge, the methane content of gas can be 60%. Consequently, Waste Management attempts to collect as much organic material as possible for its landfills with gas-to-energy facilities. Yard waste and grass clippings are particularly useful, because they contain bacteria necessary for the decomposition process. When Senator Gard asked whether any additional bacteria is added to the landfill, Mr. Davis explained that no new bacteria is introduced, but noted that inorganic covers are removed from trash to expose organic materials to as much air and moisture as possible to speed decomposition. Waste Management also practices liquid recirculation, which recycles leachate back into the landfill to maintain moisture. Mr. Davis contrasted this current recirculation practice with the "bioreactor" process being studied, explaining that the bioreactor method involves introducing new sources of liquid into the waste.

Citing Waste Management's statistic concerning the oil-equivalent energy output of the Danville site, Representative Murphy asked how the 112,000 barrels of oil saved each year through the energy produced at the site compares to Indiana's annual energy consumption in terms of barrels of oil. While Mr. Davis did not have information on Indiana's yearly oil consumption, he noted that the 25 MW produced at all gas-to-energy facilities in the state is a small fraction of the amount produced by coal-fired plants. He estimated that only 10% to 15% of the landfill gas that could be utilized in Indiana is currently being captured and converted.

In response to questions by Representatives Murphy and Behning, Mr. Davis indicated that only one gas-to-energy plant operates at a profit. Most facilities do not operate at profit, because of Indiana's low electricity prices. For example, Waste Management sells the electricity produced at its Danville facility to Cinergy for $0.03/kWh. Wabash Valley sells electricity from the other Danville facility to REMCs, which market the power through an optional program in which customers are charged a premium for the renewable-based energy.

Finally, Senator Wyss asked whether there was any environmental or financial benefit to be gained from capturing the carbon dioxide that makes up the remaining 45% of the landfill gas. Mr. Davis indicated that Waste Management has been unable to develop any economically viable facilities to capture and sell carbon dioxide. In trials run at a Wisconsin plant, the carbon dioxide could not be made clean enough to be marketable. Mr. Davis explained that it is very difficult to remove trace gases from the carbon dioxide.

(4) Testimony from Water Furnace

Following the discussion of gas recovery systems, Phil Albertson, the regional director of Water Furnace International, spoke to the Committee about geothermal heating and cooling systems. Based in Fort Wayne, Water Furnace installs geothermal heating and cooling systems in homes, businesses, and schools. Noting that such systems reduce energy costs by 60% by increasing the efficiency of the consumer's heat pump, Mr. Albertson explained that geothermal systems capture solar energy stored in the ground through a series of underground pipes installed at the site of the home or building. For every BTU of energy purchased from the consumer's energy supplier, the pump delivers four BTUs of energy from the ground, resulting in an efficiency rating of 400%. Systems can either be entirely electric or have duel-fuel capability, allowing them to work in conjunction with a building's natural gas supply. Additionally, geothermal systems are capable of supplying up to 50% of a building's hot water by making use of waste heat. According to Mr. Albertson, geothermal systems also offer certain environmental advantages. He noted that geothermal pumps use one-third the amount of refrigerants used by traditional systems, thus releasing lower amounts of refrigerants back into the air.

While these long-term efficiency and environmental advantages result in higher up-front costs for a geothermal system, Mr. Albertson pointed out that the customer is able to recoup the initial investment through reduced energy costs over the system's lifetime. In response to a question by Representative Frizzell about the average cost to install a system in a 2,500 to 3,000 ft² home, Mr. Albertson estimated that the initial cost is $3,500 to $4,000 more than for a traditional system. However, when a system is installed as part of the construction of a new home, the additional cost is figured into the mortgage payment, which results in the cost being tax deductible to the homeowner. If the homeowner then sells the home within five to seven years, the subsequent buyer assumes the remaining up-front costs of the system through the mortgage. This means that the original homeowner has paid only for his own use of the system, while having benefitted from reduced energy costs during that use. Such reduced energy costs were confirmed by Senator Wyss, who shared that he had retrofitted his 1,800 ft² home and saved $500 in energy costs during the first year.

(**5) Testimony from the Indianapolis Electrical Joint Apprenticeship and Training Center**

Next, Representative Stevenson invited Kevin Marsh of the Indianapolis Electrical Joint Apprenticeship and Training Center to discuss solar panels. Mr. Marsh explained that the Center provides training in the electrical trades to journeymen and apprentices, through a

partnership between the International Brotherhood of Electrical Workers, the Indiana Contractors Association, and over 66 local businesses. In addition to providing this training, the Center is also involved in the production of solar panels that are used to capture and convert solar energy into useful energy for homes and businesses.

Mr. Marsh explained that advances in solar system technology have resulted in reduced costs for such systems over time, with such systems now costing 1% of what they did during the 1970s. In sunny climates, solar systems can be used as the main source of power for a home. However, even in locations with less dependable sunlight, such as Indiana, solar systems can be used as a supplemental power source to homes already connected to the electricity grid. For example, a grid-connected customer can rely on the home's solar system for the majority of the home's energy needs, drawing on the grid only when home consumption exceeds the solar system's capacity. However, if the solar system produces more electricity than the household consumes, the surplus power is immediately returned to the grid, where it becomes available for other utility customers. Under a billing arrangement known as "net metering," the homeowner is billed only for the difference between the energy the home consumes and the energy returned to the grid.

Mr. Marsh suggested that net metering arrangements will become more common in Indiana and pointed to IPL, Cinergy/PSI, and the South Central REMC as utilities that already offer incentives to customers using solar systems. Such utilities have recognized the ability of net metering to increase grid reliability during times of peak demand. For example, solar systems operate at their highest efficiency during the summer, which is also when demand on the grid is at its peak, due to increased use of air conditioning. Solar systems are thus able to return power to the grid during peak demand periods, lessening the utility's need for scheduled brownouts.

Having pointed out the potential of solar power to increase systemwide reliability, Mr. Marsh concluded his remarks by encouraging legislators to provide incentives for solar power and other renewable energy sources through the creation of a sustainable energy corporation, as urged in HR 66.

(6) Testimony from Wolfsong Wind Systems

Turning the discussion from solar to wind power, Derrick Adkins, President of Wolfsong Wind Systems, addressed the Committee on Indiana's potential for wind power. With his company based in northern Indiana, Mr. Adkins was pleased when the Department of Commerce's Energy Policy Division recently commissioned a remapping of Indiana's wind resources. According to Mr. Adkins, the preliminary results of that remapping have demonstrated an encouraging potential for wind power in the state. Like other renewable energy sources, wind power can be used both to offset the electricity used by individual consumers, and as an alternative to natural gas for powering electric generating facilities.

Noting the potential benefits of wind power for Indiana's long-term energy outlook, Mr. Adkins described various policy incentives to encourage the use of such power. For example, the creation of a sustainable energy corporation, such as that proposed in HR 66, would provide incentives for customers to reduce their use of nonrenewable energy sources. Another option would be to enact a "renewable portfolio standard," or RPS, which would require utilities to generate a certain percentage of their electricity from renewables by a specified date. Mr. Adkins reported that several neighboring states, including Ohio, Illinois, Wisconsin, Iowa, and Minnesota, have already adopted such standards.

In conjunction with the establishment of an RPS, some states have set benchmarks for

distributed generation, in which business and industrial consumers produce their own power on-site, thus reducing the demand on the energy grid. Businesses that use distributed generation may also be able to participate in net metering arrangements, by remaining connected to the grid and selling any excess power produced back to the local utility. Addressing the current status of net metering in Indiana, Mr. Adkins indicated that the IURC has adopted rules on the practice, but that such rules are less comprehensive than those of other states.

In closing, Mr. Adkins noted that large-scale wind farms in the Midwest are currently producing wind energy for $0.02 to $0.04/kWh, a price comparable to that for energy from coal-fired plants.

(7) Testimony from the Indiana Chamber of Commerce[11]

With the Committee having been briefed on the various opportunities for sustainable energy in Indiana, Vince Griffin, Vice President for Environmental and Energy Policy at the Indiana Chamber of Commerce, presented the Chamber's position on a comprehensive energy policy for the state. According to Mr. Griffin, the Chamber supports a policy that incorporates the following: (1) a diversified fuel mix, including clean coal, natural gas, nuclear power, and renewables; (2) investment in new energy technologies, such as fuel cells; (3) an assessment of Indiana's electric infrastructure, including transmission and distribution capabilities; (4) regulatory controls that encourage the responsible building of new power facilities; and (5) energy efficiency and conservation measures.

Turning to the state's current energy resources, Mr. Griffin reported that Indiana has an in-ground coal supply of 500 years. Indiana is second only to Texas in the amount of coal consumed each year, and the state's electric power rates rank in the lowest ten in the nation. In terms of production, 90% of Indiana's electricity is generated from coal. Mr. Griffin noted that while the nation now uses three times as much coal as it did in 1970, the amount of pollution produced from coal has been reduced by 35% over the same period. Given the nation's and Indiana's large supply and consumption of coal, Mr. Griffin encouraged further investment in clean coal technology and pointed to the new Center for Coal Technology Research at Purdue as a potential source of new innovations.

Noting the difficulty Purdue had in obtaining initial funding for the Center, Representative Murphy contrasted the different policy decisions involved in supporting such university-based research centers, versus providing government incentives to encourage investment in particular products sold in the marketplace. Given the Chamber's role in advocating for businesses, he asked Mr. Griffin for the Chamber's position on governmental subsidization of Waste Management specific energy-efficient products or technologies. Mr. Griffin responded that while the Chamber has not promoted the subsidization of specific products, it has encouraged partnerships between Indiana businesses and universities to develop new energy-related technologies and products that can be produced in the state and marketed nationwide.

Representative Pelath then asked whether the Chamber has heard from its members about economic development challenges in counties designated by the EPA as "non-attainment" areas for failure to meet federal air quality standards. He also wondered whether the use of alternative energy sources could help mitigate any of these challenges. Mr. Griffin indicated that with over 75% of the state's population now living in non-attainment areas, businesses have faced significant impediments to investing in certain

[11]See Exhibit 9.

industries. As to whether new technologies could provide a solution, he stated it would depend on the ability of the particular product or process to remove targeted pollutants, such as NOx. However, Mr. Griffin suggested that under the Clear Skies initiative proposed by the Bush Administration, all of Indiana would be able to meet the standards for ozone and fine particulate matter.

After Mr. Griffin's testimony, Representative Stevenson notified the Committee that the next meeting would probably be scheduled for the first week in October at the headquarters of the Midwest Independent System Operator (MISO) in Carmel. In addition to learning about MISO, the Committee would receive the annual reports from the IURC and hear testimony on natural gas issues. He and Senator Merritt then adjourned the meeting at approximately 4:15 p.m.